

**Flood Control Project Maintenance  
Levee Inspections**

**Fall 2014 Levee Maintenance Deficiency Summary Report**

**Overall LMA & Unit Ratings, including USACE Erosion Survey**

***Sacramento River Basin***

<b>RD1601</b>	Overall LMA Rating	Total LMA Miles						
<b>Reclamation District No. 1601 Twitchell</b>	<b>A</b>	<b>2.43</b>						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Supplemental</i>								
DWR UCIP Field Study					0.06	0.01		
<i>LMA Totals:</i>	0.00	0.00	0.00	0.00%	0.06	0.01	0.00	0.00

**Flood Control Project Maintenance  
Levee Inspections**  
**LMA District Cover Sheet**  
**Fall 2014 Levee Inspection Results**

**Reclamation District No. 1601 Twitchell**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
* Overall LMA Rating (Fall Only)			A	

\*\* Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

\*

SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments


**Flood Control Project Maintenance  
Levee Inspections**

**Unit Cover Sheet**

**Fall 2014 Levee Inspection Results**

**Reclamation District No. 1601 Twitchell**

Waterway			Bank	Unit Miles
Unit No. 01 Threemile Slough			Left	2.43
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	03/06/2014 - 03/06/2014		10/13/2014 - 10/13/2014	
DWR Inspector	Richard Willoughby		Richard Willoughby	
Accompanied By				

**Summer & Winter Inspections**

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

*The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.*

**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2014**

**Reclamation District No. 1601 Twitchell**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Threemile Slough	Left	2.43	10/13/2014 10/13/2014	Richard Willoughby

LM Start	<b>0.00</b>	Rating **	A	Issue No.	<b>6</b>
LM End	<b>0.00</b>	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals				°
					°
DWR ID	DWR_RD1601_01_s_2013_6				
Action/Comments					
Inspector Comments: LMA has a copy of the O & M Manuals on file at the office.					

No Photos

LM Start	<b>0.00</b>	Rating **	A	Issue No.	<b>7</b>
LM End	<b>0.00</b>	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment				°
					°
DWR ID	DWR_RD1601_01_s_2013_7				
Action/Comments					
Inspector Comments: LMA has adequate floodfight supplies on hand.					

No Photos

LM Start	<b>0.00</b>	Rating **	A	Issue No.	<b>8</b>
LM End	<b>0.00</b>	Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training				°
					°
DWR ID	DWR_RD1601_01_s_2013_8				
Action/Comments					
Inspector Comments: LMA staff will be involve in the Twitchell Island training on Oct. 22-23, 2014.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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## Reclamation District No. 1601 Twitchell

Looking south at typical view of levee crown.

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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2014**

**Reclamation District No. 1601 Twitchell**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Threemile Slough	Left	2.43	10/13/2014 10/13/2014	Richard Willoughby

LM Start	<b>0.11</b>	Rating **	M	Issue No.	<b>1</b>
LM End	<b>0.11</b>	Issue Type +	En	Location *	CR
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP Field Study		38.120708 °	38.120708 °	
			-121.682798 °	-121.682798 °	
DWR ID	DWR_RD1601_01_f_2014_1				

No Photos

Action/Comments					
Inspector Comments: FS_ID:33655 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears this crossing might have been recently modified--O&M manual calls for 8 inch pipe not 12 inch pipe, need additional information--exposed section of pipe is protected with white paint. Need to contact owner to obtain records. Recommend clearing vegetation along the pipe alignment. FIELD_STRUCT_DESC: 12-inch (not 8 inch listed in USACE) siphon through the levee approximately 3.2 feet below the crown. The existing 8-inch pipe listed in the O&M manual is no longer present at LM 0.1 (USACE-1959), no permit was found authorizing crossing modifications. FS Date: 5/14/2013					

LM Start	<b>0.11</b>	Rating **	M	Issue No.	<b>2</b>
LM End	<b>0.11</b>	Issue Type +	En	Location *	CR
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP Field Study		38.120716 °	38.120716 °	
			-121.682796 °	-121.682796 °	
DWR ID	DWR_RD1601_01_f_2014_2				

No Photos

Action/Comments					
Inspector Comments: FS_ID:22043 EP_NO: 11227 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears this crossing might be been recently modified--exposed section of pipe is protected with white paint. Need to contact owner to obtain records. Recommend clearing vegetation along the pipe alignment. FIELD_STRUCT_DESC: 14-inch pipe (not 12-inch pipe as original description noted) through the levee, 4.0 feet below the crown. Siphon primer on waterward shoulder. 36-inch steel (not concrete as original description noted) pipe with shut-off valve inside at landward toe ditch. (ABO No. 11227-1975) FS Date: 5/14/2013					

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance  
Levee Inspections**

**Levee Inspection Report By Mile - Fall 2014**

**Reclamation District No. 1601 Twitchell**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Threemile Slough	Left	2.43	10/13/2014 10/13/2014	Richard Willoughby

LM Start	0.18	Rating **	C	Issue No.	3
LM End	0.18	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.119698 °	38.119698 °
				-121.682760 °	-121.682760 °
DWR ID	DWR_RD1601_01_s_2013_3				
Action/Comments					
Note and monitor erosion site.					
Inspector Comments: District repaired site.					

No Photos

LM Start	0.80	Rating **	M	Issue No.	4
LM End	0.80	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.111078 °	38.111078 °
				-121.682011 °	-121.682011 °
DWR ID	DWR_RD1601_01_f_2014_4				
Action/Comments					
Inspector Comments: FS_ID:39946					
EP_NO: N/A					
Repair Type: Non-Urgent					
Crossing Status: Indicator Found					
UCIP Comments: Unable to determine if line crosses levee. Need to					
contact owner to determine if crossing goes through levee. Also need to					

No Photos

LM Start	<b>0.80</b>	Rating **	U	Issue No.	<b>5</b>
LM End	<b>0.80</b>	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.111078 °	38.111078 °
				-121.682011 °	-121.682011 °
DWR ID	DWR_RD1601_01_f_2014_5				
Action/Comments					
Inspector Comments: FS_ID:33656					
EP_NO: N/A					
Repair Type: Urgent					
Crossing Status: Not Found					
UCIP Comments: no markers or signs available--will need to coordinate					
with owner to determine if crossing is still being used or abandoned.					
FIELD_STRUCT_DESC: 12-inch steel gas line through the levee.					
Facility on landward side.					
FS Date: 5/14/2013					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Reclamation District No. 1601 Twitchell**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Threemile Slough	Left	2.43	10/13/2014 10/13/2014	Richard Willoughby

LM Start	1.43	Rating **	M	Issue No.	9
LM End	1.43	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.102422 °	38.102422 °
				-121.684289 °	-121.684289 °
DWR ID	DWR_RD1601_01_f_2014_9				
Action/Comments					
Inspector Comments: FS_ID:39947					
EP_NO: N/A					
Repair Type: Non-Urgent					
Crossing Status: Indicator Found					
UCIP Comments: Unable to determine if line crosses levee. Need to contact owner to determine if crossing goes through levee. Also need to determine permit authorizing work on landward side.					
FIELD_STRUCT_DESC: Steel stand pipe with PVC pipe inside located on landward shoulder. Rip rap located on waterward slope. Unable to determine if crossing goes through levee. Appears to be monitoring gas well.					
FS Date: 3/19/2009					

No Photos

LM Start	1.80	Rating **	M	Issue No.	10
LM End	1.80	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.097105 °	38.097105 °
				-121.684815 °	-121.684815 °
DWR ID	DWR_RD1601_01_f_2014_10				
Action/Comments					
Inspector Comments: FS_ID:39948					
EP_NO: N/A					
Repair Type: Non-Urgent					
Crossing Status: Indicator Found					
UCIP Comments: Unable to determine if line crosses levee. Need to contact owner to determine if crossing goes through levee. Also need to determine permit authorizing work on landward side.					
FIELD_STRUCT_DESC: Steel stand pipe with PVC pipe inside located on landward shoulder. Rip rap located on waterward slope. Unable to determine if crossing goes through levee. Appears to be monitoring gas well.					
FS Date: 3/19/2009					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Reclamation District No. 1601 Twitchell**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Threemile Slough	Left	2.43	10/13/2014 10/13/2014	Richard Willoughby

LM Start	2.08	Rating **	M	Issue No.	11
LM End	2.08	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.093107 °	38.093107 °
				-121.684525 °	-121.684525 °
DWR ID	DWR_RD1601_01_f_2014_11				

No Photos

Action/Comments					
Inspector Comments: FS_ID:19545 EP_NO: 2909A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears this crossing might be been recently modified--exposed section of pipe is protected with white paint. Need to contact owner to obtain records. Recommend clearing vegetation along the pipe alignment. Dense vegetation on landward slope limits the inspector's visibility to identify signs of leaks along levee slope. FIELD_STRUCT_DESC: 8-inch siphon pipe through levee, 2.4 feet below crown. Cutoff wall around pipe at center of levee. Siphon breaker on apex of pipe on landward shoulder. Hand primer pump on landward slope. (Permit No. 2909A-1960) FS Date: 5/14/2013					

**\* Location**

LS : Land Side    N/A : Not Applicable  
WS : Water Side  
CR : Crown

**\*\* Rating**

A : Acceptable                      N : Not Inspected/Rated  
M : Minimally Acceptable        C : Corrected  
U : Unacceptable                  A/W : Acceptable but Monitor & Maintain

**+ Issue Type**

Ma : Maintenance Deficiency  
Ob : Design & System Obsolescence  
En : Enforcement